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PATENT

Application No. 10/812,837

Attorney Docket No.: 92030/03-701

Amendment

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-13 (Canceled)

14. (Previously Presented) A method of implanting a bone implantable device comprising the steps of:

installing a carrier into a carrier receiving area of a bone implantable device;

implanting the bone implantable device adjacent a target bone structure;

applying biologically active substance onto said carrier after said step of implanting for subsequent delivery to said target bone structure.

15. (Original) The method according to claim 14 further comprising the steps of:

applying said carrier into said carrier receiving area prior to said step of implanting.

16. (Original) The method according to claim 14 further comprising the steps of:

injecting said biologically active substance through an injection port into said carrier receiving area.

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17. (Canceled)

18. (Currently Amended) An interbody spine fusion cage for fusing adjacent vertebrae, said spinal fusion cage comprising:

a cage body defining an outside surface;

a carrier receiving area defined by said cage body;

an un-doped carrier material loaded in said carrier receiving area;

a port that communicates said outside surface with said carrier receiving area for facilitating delivery of a biologically active substance onto said un-doped carrier material to bind said biologically active substance with said carrier material;

a pathway that communicates with said carrier receiving area for delivering said biologically active substance from said carrier receiving area to a target bone structure;

an end cap on an end of said cage body for enclosing said carrier receiving area; and

wherein said port is defined by said end cap.

19. (Canceled)

20. (Canceled)

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21. (Previously Presented) An interbody spine fusion cage for fusing adjacent vertebrae, said spinal fusion cage comprising:

a cage body defining an outside surface;

a carrier receiving area defined by said cage body;

an un-doped carrier material loaded in said carrier receiving area;

a port that communicates said outside surface with said carrier receiving area for facilitating delivery of a biologically active substance onto said un-doped carrier material;

a pathway that communicates with said carrier receiving area for delivering said biologically active substance from said carrier receiving area to a target bone structure;

an end cap on an end of said cage body for enclosing said carrier receiving area;

wherein said port is defined by said end cap; and further comprising:

a plug in said port adapted to be penetrated by a delivery device.

Claims 22-52 (Canceled)

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53. (Previously Presented) A method of implanting a bone implantable device comprising the steps of:

pre-loading a carrier doped with a fluidal biologically active substance into a carrier receiving area of a bone implantable device;

implanting the bone implantable device adjacent a target bone structure for facilitating a migration of said biologically active substance into contact with said target bone structure but otherwise confining the biologically active substance within the device.

54. (Previously Presented) The method according the claim 53 wherein:

said migration of said biologically active substance is promoted by body fluid contact.

55. (Previously Presented) The method according the claim 53 wherein:

said migration of said biologically active substance is promoted by body heat.

56. (Previously Presented) An implantable device for locating within a body, said implantable device comprising:

a body defining an outside surface;

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a carrier receiving area defined by said body;
an un-doped carrier material loaded in said carrier receiving area;
a port that communicates said outside surface with said carrier receiving area for facilitating delivery of a biologically active substance onto said un-doped carrier material;
a pathway that communicates with said carrier receiving area for delivering said biologically active substance from said carrier receiving area to a target bone structure;
a plug in said port adapted to be penetrated by a syringe; and
the interbody spine fusion cage further comprising:
a substantially solid end cap on an end of said cage body wherein said end cap encloses said carrier receiving area; and
wherein said port is defined by said end cap.

57. (Previously Presented) A bone implantable device for locating adjacent a target bone structure, said bone implantable device comprising:

a body defining an outside surface;
a carrier receiving area defined by said body;
a pre-loaded carrier material in said carrier receiving area, said pre-loaded

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carrier material comprising a biologically active substance;

a pathway that communicates with said carrier receiving area for delivering said biologically active substance from said carrier receiving area to the target bone structure;

a plug in said port adapted to be penetrated by a syringe; and

the interbody spine fusion cage further comprising:

a substantially solid end cap on an end of said cage body wherein said end cap encloses said carrier receiving area; and

wherein said port is defined by said end cap.

58. (Currently Amended) An interbody spine fusion cage for fusing adjacent vertebrae, said spinal fusion cage comprising:

a cage body defining an outside surface;

a carrier receiving area defined by said cage body;

an un-doped collagen carrier material loaded in said carrier receiving area;

a port that communicates said outside surface with said carrier receiving area for facilitating delivery of a biologically active substance onto said un-doped carrier material;

a pathway that communicates with said carrier receiving area for delivering

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said biologically active substance from said carrier receiving area to a target bone structure;

a plug in said port adapted to be penetrated by a syringe;

a substantially solid end cap on an end of said cage body wherein said end cap encloses said carrier receiving area; and

wherein said port is defined by said end cap.

59. (Cancelled)

60. (Currently Amended) An implantable device for locating within a body, said implantable device comprising:

a body defining an outside surface;

a carrier receiving area defined by said body;

an un-doped collagen carrier material loaded in said carrier receiving area;

a port that communicates said outside surface with said carrier receiving area for facilitating delivery of a biologically active substance onto said un-doped carrier material;

a pathway that communicates with said carrier receiving area for delivering said biologically active substance from said carrier receiving area to a target bone

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structure;

a plug in said port adapted to be penetrated by a syringe;

a substantially solid end cap on an end of said cage body wherein
said end cap encloses said carrier receiving area; and
wherein said port is defined by said end cap.

61. (Canceled)

62. (Previously Presented) An implantable device for locating within a body,
said implantable device comprising:

a body defining an outside surface;
a carrier receiving area defined by said body;
an un-doped, sponge material loaded in said carrier receiving area;
a port that communicates said outside surface with said carrier receiving area
for facilitating delivery of a biologically active substance onto said un-doped carrier
material;
a pathway that communicates with said carrier receiving area for delivering
said biologically active substance from said carrier receiving area to a target bone
structure.

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63. (Previously Presented) The implantable device according to claim 62 further comprising:

a plug in said port adapted to be penetrated by a syringe; and

the interbody spine fusion cage further comprising a substantially solid end cap on an end of said cage body wherein said end cap encloses said carrier receiving area; and

wherein said port is defined by said end cap.

64. (Previously Presented) A bone implantable device for locating adjacent a target bone structure, said bone implantable device comprising:

a body defining an outside surface;

a carrier receiving area defined by said body;

a pre-loaded collagen carrier material in said carrier receiving area, said pre-loaded collagen carrier material comprising a biologically active substance;

a pathway that communicates with said carrier receiving area for delivering said biologically active substance from said carrier receiving area to the target bone structure.

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65. (Previously Presented) The implantable device according to claim 64 further comprising:

a plug in said port adapted to be penetrated by a syringe; and

the interbody spine fusion cage further comprising:

a substantially solid end cap on an end of said cage body wherein

said end cap encloses said carrier receiving area; and

wherein said port is defined by said end cap.

66. (Currently Amended) A bone implantable device for locating adjacent a target bone structure, said bone implantable device comprising:

a body defining an outside surface;

a carrier receiving area defined by said body;

a pre-loaded carrier sponge material in said carrier receiving area, said pre-loaded sponge material comprising a biologically active substance;

a pathway that communicates with said carrier receiving area for delivering said biologically active substance from said carrier receiving area to the target bone structure.

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67. (Previously Presented) The implantable device according to claim 66 further comprising:

a plug in said port adapted to be penetrated by a syringe; and

the interbody spine fusion cage further comprising:

a substantially solid end cap on an end of said cage body wherein

said end cap encloses said carrier receiving area; and

wherein said port is defined by said end cap.

68. (Previously Presented) The method of implanting a bone implantable device according to claim 53 wherein said fluid is liquid.

69. (Previously Presented) The method of implanting a bone implantable device according to claim 53 wherein said fluid is a gel.

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70. (Previously Presented) A method of implanting a bone implantable device comprising the steps of:

pre-loading into a carrier receiving area of a bone implantable device a carrier doped with a dissolvable biologically active substance that liquifies after contact with body fluids;

implanting the bone implantable device adjacent a target bone structure for facilitating a migration of said biologically active substance into contact with said target bone structure but otherwise confining the biologically active substance within the device.

71. (Previously Presented) A method of implanting a bone implantable device comprising the steps of:

implanting a bone implantable device adjacent a target bone structure;
applying a fluidal bone growth agent into said bone implantable device;
facilitating migration of said fluidal bone growth agent to said target bone structure by otherwise confining the bone growth agent within said device.

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72. (Previously Presented) An interbody spine fusion cage according to claim 21

wherein:

said delivery device is a syringe.

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